

DF6100

DF61002

INSTALLATION MANUAL



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Introduction

Introduction to the Manual

This manual provides information on the installation, operation and maintenance of the Panel System.

NOTICE

The operating system of the panel may be revised as a result of enhancements to the system software or hardware. Revisions to this manual will be issued and supplied on request and should be logged in the table supplied on the contents page.

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Section 1

System Installation and Design

Introduction

The Panel provides all of the sophisticated features required of a leading edge analogue addressable fire system along with the simple operation and neat installation demanded by installers and building users.

The panel can be flush or surface mounted and the generously sized metal back box allows ample facilities for rear or top cable entries.

The panels are available in either Single or Two Loop Configuration.

A loop connected and a network connected repeater panel is available (see equipment listing page 10)

A comprehensive range of ancillary devices is available to operate with the Panel, including Optical, photo-thermal and heat detectors, base mounted and stand alone sounders (including an IP67 version) a loop powered beacon and a wide range of input and output interfaces.

Each of the Panel system components has been specifically designed to operate as part of a Panel system, this provides an assurance that the panel, the detectors, the interfaces and the ancillaries are all fully compatible with each other and that the full range of system functionality is supported by each device.

Project Planning

The following is a typical program and timetable for a Panel installation project, once the initial order has been received:

1. Project Meeting

Installer and user to be present; system specifications, schematic diagram and proposed circuit drawing to be available. Panel Installation & Commissioning Guide to be provided.

2. Equipment Fix

Typically 2 week's notice is required for equipment to be delivered. Cable to be installed and bases/back boxes to be fitted. Then fire detectors, call points, alarm sounders, isolator units and interface units to be installed.

3. Address Schedule

Schedule of sensor locations to be completed by installer and returned to enable System programming.

4. Auto Learn

Fire panel/repeater panels to be installed and terminated. System to be powered up by installer and auto learn mode activated (see Auto Learn section). System to be tested and verified by installer, prior to final commissioning.

5. Final Commissioning

Minimum 2 weeks notice is required from receipt of Address Schedule and Commission request form. Cooper Lighting Service Engineer to attend site implement/oversee the final commissioning procedures (see Commissioning section), in conjunction with the installer.

System Design Guidelines

Guidelines

Systems should to the relevant local standards and codes of practice, for the UK this is BS5839 part 1. The panel meets all the relevant requirements of BS5839 part 1: 2002. Installation planning is simplified by the fact that every addressable device contains an integral short circuit isolator. Care must be taken to ensure that local standards requirements regarding aspects such as loop coverage, area covered by a single spur and cable specification are observed.

There may be certain applications in which deviations from the code may be necessary and these must be listed on the commissioning certificate. (See commissioning section)

Loop lengths

The maximum permitted loop length is 2 km measured from the near to the far terminals on Panel Motherboard PCB. There is no minimum limit to loop length. Any wiring spurs off the loop must be included within the 2 km limit. On long loop runs, the lengths of wiring rises and falls (between floors, down to manual call points) must be included. Remember to include these especially when taking loop lengths from plan drawings.

Loop loading - total number of addresses

The total number of addresses per loop is 160. this includes sensors, call points and all other addressable items (e.g. interfaces, loop repeaters etc.) When designing systems its recommended that allowances are made for future expansion, Short circuit isolators are incorporated into every loop device, including Smoke sensors, heat sensors, sounders, callpoints and interfaces. Therefore, no further fault protection is required , in the event of a single fault, none of the devices connected to the loop will fail to operate as the fault will be isolated by the two adjacent devices.

Spur connected devices downstream of a cable fault will cease to function.

Repeater panels

Each repeater unit requires one address and consumes no more current from the loop than a smoke sensor. The repeater also requires a local mains supply and incorporates battery backup.

Loop Loading System Verification

Loop load calculations should be carried out prior to instillation.

Compatible Equipment

Compatible system components

Order Code	Description	Dimensions
		W X H X D (mm)
DF6100	1 Loop panel	495 x 400 x 180
DF61002	2 Loop panel	495 x 400 x 180
DF6100NC	1 Loop panel c/w network card	375 x 357 x 50
DF61002NC	2 Loop panel c/w network card	375 x 357 x 50
DF6000PR	Passive repeater loop connected	332 x 270 x 92
DF6000PRNC	Passive repeater network connected	332 x 270 x 92
MAP820	Optical smoke detector	101 Dia x 33D
MAH830	Multi mode heat detector	101 Dia x 43D
MAOH850	Combined photo thermal detector	101 Dia x 43D
MAB800	Common mounting base for analogue	104 Dia x 22D
MBG814	Flush Callpoint	85 x 85 x 30
MBG813	Surface Callpoint	85 x 85 x 53
MBG817	Weatherproof Callpoint	108 x 108 x 65
MAS850	Sounder base	102 Dia x 40D
MASC	Cover for MAS850	102 Dia x 13D
MAS850LPS	Wall sounder	105 x 105 x 95
MAS850LPSWP	IP66 Wall sounder	108 x 108 x 103
MAB870	Add. Beacon	95 Dia x 50D
MASB870	Sounder beacon base	115 Dia x 42D
MASB860	Wall sounder beacon	105 x 105 x 95
MASB860WP	Wall sounder beacon IP65	108 x 108 x 103
MIO324	3 Channel I/O device	150 x 89 x 58
MIO1240	1 Channel output unit (mains rated)	180 x 130 x 60
MIU871	Zone monitor unit	150 x 89 x 58
MSU840	Shop unit Interface	150 x 89 x 58
MSI850	Spur Isolator	112 x 41 x 33
MPU424	4 Way sounder circuit controller.	300 x 300 x 74
MCIM	Single channel input unit	35 x 18.5 x 63
MCOM	Single channel output unit	35 x 18.5 x 63
MCIM-C	Single channel input unit	35 x 18.5 x 63
MCOM-S	Single channel output unit	35 x 18.5 x 63
MRIAD	Addressable Remote Indicator	87 x 87 x 49

Equipment Compatibility

Sensors

Loop wired sensors must be of the Cooper soft addressed analogue type. Cooper conventional detectors can be connected via a Zone Monitor Unit or Shop Unit interface. The connection of other detector types via a Zone Monitor Unit or Shop Unit interface is not recommended,

Call points

Loop wired call points must be the Cooper series soft addressed analogue type, Cooper series conventional callpoints can be connected via a Zone Monitor Unit or Shop Unit interface.

The connection of other callpoint types via a Zone Monitor Unit or Shop Unit interface is not recommended,

Sounders

Loop powered addressable sounders must be of the Menvier 800 series soft addressed analogue type.

Conventional sounders can also be connected either to the conventional sounder circuits at the panel or to the loop via an addressable sounder controller interface providing they meet the following:

- 1) They are suitable for operation between 18V and 28V.
- 2) They are polarised and suppressed.
- 3) The total alarm load is less than the rating of the panel / Alarm Power Interface.

Note: It is possible to use devices outside these requirements if they are supplied with power from a separate source and switched via a suitable relay.

Relay circuits

There are Relay circuits built-in the standard Panel. Additional relays can be added to the system by using Cooper soft addressing, Single Channel or 3 Channel Input/Output Units.

Relays / Auto-dialers and auxiliary equipment

A wide variety of relays and other equipment can be connected to the system, but you should note the following constraints:

- 1) The Panel provides monitored outputs to drive fire and fault relays mounted in external equipment. External relays should be suppressed. If a non-suppressed relay is used then a diode can be connected as shown in the wiring diagram in the appendix, to suppress any reverse EMF on the release of the relay which might cause the panel to malfunction.
- 2) A 24V DC output is provided at the panel to make it easy to connect ancillary equipment. Although the panel can supply a continuous quiescent load of up to 30mA, BS5839 precludes this practice and any ancillary equipment you connect should only consume power in the alarm or fault mode to meet the requirements of BS5839.

Equipment Compatibility

Additional instructions for electromagnetic compatibility

When used as intended this product complies with EMC Directive (89/336/EEC) and the UK EMC regulations 1992 (SI 2372/1992) by meeting the limits set by the standards BS 5406 (Pts 2&3) 1988, EN50130-4 immunity and EN 61000-6-3 emission requirements.

The following installation guidelines must be followed.

1. External cables must be connected using the cable entries or knockouts provided.
2. When routing external cables inside the product they must be
 - a) Kept as short as possible
 - b) Routed close to the housing
 - c) Kept as far as possible from the electronics

Any modifications other than those stated in this manual, or any other use of this product may cause interference and it is the responsibility of the user to comply with the EMC and Low Voltage Directives.

System Overview

Simple user interface

The main element of the user interface with is a large (120mm x 90mm visible area) touch screen display, which provides comprehensive user information and also acts as a multifunctional keypad.

Comprehensive context sensitive help information is provided throughout the menus to assist unfamiliar users with system operation.

The Panel touch screen display automatically reconfigures to suit the selected function, for example, if the change device text menu option is selected, the touch screen is automatically formatted as a full QWERTY keyboard to enable fast and simple text entry.

The use of the touch screen display enables a wide range of user and engineering facilities to be incorporated into the panel whilst still offering simple operation.

User configuration and maintenance facilities

The Panel has comprehensive facilities for on site system configuration, whereby the user can add or remove simple devices or change device text directly via the panel, without the need for a service engineer to visit site. For initial configuration or major system changes special PC configuration software is available enabling Cooper Lighting and Security personnel to do this more efficiently than can be achieved using the system screen. Exiting configurations can be uploaded to the PC so that changes can be made to the existing system rather than having to revert to initial files.

Sophisticated sounder control facilities

The Panel has the ability to support highly complex ringing pattern requirements. Multistage cause and effect programming is possible whereby each addressable sounder or output interface can be programmed independently if required and can be set to respond to specific addresses, specific detection zones, specific panels on a networked system or standard global ringing.

The panel supports three separate sets of programming per sounder and each stage can be triggered differently For example, if a single detector is triggered the panel can

System Overview

be programmed such that the sounder nearest to the detector operates immediately and continuously, the remaining sounders in the affected zone operate in pulsed mode and the other sounders delay for a selectable period to allow the cause of the alarm to be investigated before global ringing commences.

Spur tolerant soft addressing

The Panel utilises intelligent soft addressing technology to greatly simplify the installation and commissioning processes.

Once the system has been installed and the autolearn menu selected, the control panel will automatically scan the detection loop and allocate each device with an address number corresponding with its position on the loop, this avoids the traditional need for manual addressing of the system devices which is time consuming and provides a potential for error.

A major innovation with the Panel is the ability to incorporate spurs of analogue devices which are fed from the loop by utilising a spur isolator.

Whenever the panel detects a spur, it breaks from allocating address numbers to the loop wired devices, allocates address numbers to each of the devices on the spur in sequence and then continues to address the devices on the main loop.

Every analogue device incorporates an integral short circuit isolator ensuring maximum system integrity. A single short circuit will not disable any loop-mounted devices, the isolators in the devices each side of the short circuit will operate and the control panel will drive communication from both ends of the loop.

The spur isolator also incorporates a short circuit isolator such that in the event of a short circuit on the spur, the integrity of the main loop will not be compromised.

Please refer to local standards e.g. BS5839 Pt1:2002 for details of the maximum allowable are to be covered by a single spur.

Simple future expansion

The Panel is designed to ensure simplicity of future expansion.

If an additional device is added after the system has been programmed, the Panel will allocate the next available address, it will not alter any of the existing address numbers allocation thus enabling simple updating of as fitted drawings etc.

Similarly if a device is removed, the relevant address is saved as a spare address for future use, the addresses of the remaining devices are not altered.

Multiple Languages

The Panel supports a large number of languages as standard

Technical Specification

Power Specification

Mains Fuse	: 1.6A Slow Blow
Nominal Voltage	: 230 Vac + 10%, -15%
Nominal Current	: 75mA

The Panel is protected by an internal thermal device, this requires no maintenance

Batteries

Number of Batteries	: 2
Manufacturer:	:YSP12-7
Capacity	: 7 Ah
Battery Fuse	: 4A Quick Blow (F4)
Maximum battery current;	: 3.5 Amps
Standby current (mA)	: 100 (1 loop)

Inputs

Addressable Loops	
Max Number	: 1 or 2 (Panel dependant)
Max Loop Load per loop	: 500 mA
Max Number of Addressable Devices per loop	: 150
Class Change	: Operated by external volt free contact

Outputs

Conventional sounder circuits

Number of sounder circuits	: 2
Total sounder Load	: 1.5 Amps
Sounder Circuit Fuses (F1/2/3/4)	: 1.6 Amp (Quick Blow)
End of line resistor	: 6k8

Fire Routing Equipment

Max Load	: 60 mA
Fused (PTC2)	: 100mA polyswitch
End of Line resistor	: 6k8

Fire Protecting Equipment

Max Load	: 60 mA
Fused (PTC3)	: 100mA polyswitch
End of Line resistor	: 6k8

Fault Routing equipment

Max Load	: <10 mA
Fused (PTC1)	: 100mA polyswitch
End of Line resistor	: 6k8

Auxiliary Relays

The auxiliary relays provide fused volt free change over contacts. These contacts are not monitored.

Max Load	: 24 Volts 1 Amp
Fuse (PTC4)	: 1.35 Amps polyswitch

Technical Specification

Auxiliary 24V Supply

Nominal Voltage	: 24 Volts $\pm 10\%$
Fuse (PTC5)	: 100 mA Polyswitch
Maximum current	: 30 mA

This output is not to be used for Fire protecting equipment or Fire alarm routing Equipment
Any power taken from the alarm system will effect the standby duration

RS485 Port

This is a serial output port for driving the Repeater panels, mimics etc..

This output is short circuit protected

Max Cable Length	: 2Km
Min Recommended cable size	: 1mm ² (Screened)

RS232 Port

This is a serial output port for driving the Repeater panels, mimic etc..

This output is short circuit protected

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Mechanical Specification

Weight including batteries	: 9 Kg
Weight excluding batteries	: 4 Kg
Dimensions (Standard batteries)	: 335mm(L) x 375mm(H) x 95mm(D)
Type of Material (backbox)	: Mild Steel (Power Coated)
Type of Material (Facia)	: PC/ABS
Flammability Rating	: UL 94 V0
Total Number of knockouts	: 11
Diameter of Knock out	: 20mm

TERMINAL BLOCKS : DO NOT USE EXCESSIVE FORCE WHEN TIGHTENING THE SCREWS ON THE TERMINAL BLOCK

Optional Functions as per EN54 P2&4

The Panel is Designed to the requirements to EN54 Parts 2 & 4 including all the following options which can be selected as required

PANEL OUTPUTS

Panel Sounders: (OPTION 7.8 EN54 PT 2)

Two Sounder outputs are provided. ONLY polarised equipment should be used.

Ensure the polarity of the connections are observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

The total alarm load across all sounder outputs = 1.5 Amp

All outputs are fused with 1.6 Amp Glass fuse Alarm devices should be spread equally across the 2 sounder circuits.

WARNING: DO NOT EXCEED THE RATED OUTPUT CURRENT

OUTPUT FIRE ALARM ROUTING EQUIPMENT (OPTION 7.9 EN54 PT 2)

This output, which is fused, and monitored using a 6.8k end of line resistor, is used for the automatic transmission of the fire signals to fire alarm routing equipment (e.g. Fire brigade). It operates by providing 24 Volt output to an auxiliary device (e.g. relay).

It is current limited to 30 mA using a resettable polyswitch. Class change and test conditions do not operate this output. If operated under a fire alarm condition, the indication will be displayed on the Touch screen display and will remain until the fire alarm is reset.

Ensure the polarity of the connections are observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

OUTPUT TO FIRE ALARM PROTECTING EQUIPMENT (OPTION 7.10 EN54 PT 2)

This output, which is fused, and monitored using a 6.8k end of line resistors used for the transmission of the fire signals to controls for automatic fire protecting equipment (e.g. Door released units etc).It operates by providing 24 Volt output to an auxiliary device (e.g. relay).

It is current limited to 30 mA using a resettable. polyswitch. Class change and test conditions do not operate this output. If operated under a fire alarm condition , this output remains energised until the fire alarm is reset.

Ensure the polarity of the connections is observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

OUTPUT TO FAULT WARNING ROUTING EQUIPMENT (OPTION 9.4.1C EN54 PT 2)

This output, which is fused and monitored using 6.8k end of line resistor, is used for the transmission of fault signals to fault warning routing equipment This output is monitored using 6k8 end of line resistor and it current limited to 30 mA. Under normal condition it operates by providing 12vdc which can be connected directly to a 12v auxiliary device(relay).It is current limited to 30 mA.

Optional Functions as per EN54 P2&4

Under fault conditions or even if the Panel is powered down, this output will be switch to 0 volts. Ensure the polarity of the connections is observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

Delays to outputs (Option 7.11 of EN54pt 2)

The Panel has the option to delay the operation of panel sounders, the fire routing equipment output and the fire protecting Equipment. This delay is selectable using the site installer download software .The delay is configurable in increments of 1 minute up to a maximum of 10 minutes. This delay can be enabled and disabled at access level 2. The Panel has the facility for a specific call point to override this delay by programming this call point via an input interface to provide an evacuate signal using site Installer.

Coincidence Detection (Option 7.12 of EN54 pt 2)

The Panel has the facility to inhibit the operation of the output sounders, Output to Fire routing equipment and the output of the fire protecting equipment until one more confirmatory signals are received from different zones. This feature is programmable using Site Installer Software.

Alarm Counter (Option 7.13 of EN54 pt2)

The Panel has provision to record the number of instances that the CIE enters the fire alarm condition. The information is available at access level 2.

TEST (Option 16 of EN54)

The Panels equipped with the test option and can be implemented by either Zone or Address.

Alarm Verification

The Panel has the facility for global alarm verification where the detector alarm decision is integrated over 30 seconds.

Cable & Wiring

Only the cable types listed below are allowable for loop connections.

1. Enhanced Fire TUF
2. Fire TUF™
3. FP200
4. MICC

When choosing your preferred cable type, you must take note of the following cable and wiring requirements.

1. The cable must be 2 core screened with an over sheath.
2. Maximum loop length with any of the above cables is 2KM
3. Maximum volt drop must be limited to 7 volts.
2. The conductors should be 1.5mm minimum.
3. Multicore cable should not be used for detector wiring.
4. Different loops should NEVER be run within the same cable.
5. Loop feeds and returns should never be used within the same cable.

Cable Resistance

Core Diameter	Typical FP 200 Resistance
1.0mm ²	18.1 Ohms/km/Core
1.5mm ²	12.1 Ohms/km/Core
2.5mm ²	7.41 Ohms/km/Core
4.0mm ²	4.61 Ohms/km/Core

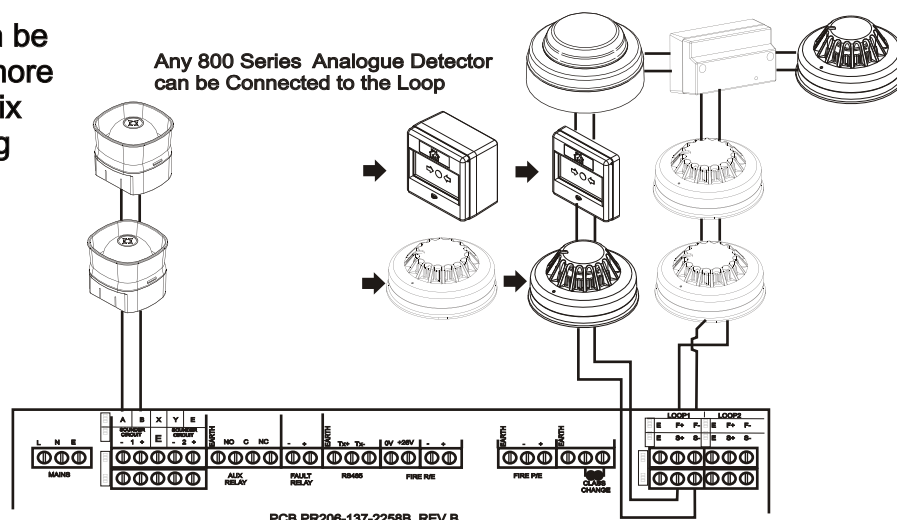
Installation

The panel should be installed in a clean, dry, reasonably well ventilated place, and not in direct sunlight. Temperatures in excess of +45°C and below -10°C may cause problems, if in doubt consult **Technical Support**. The panel should be located away from any potential hazard, in a position where it is readily accessible to authorised staff, and the fire services, ideally on the perimeter of a building near a permanent entrance. Mount the panel to the wall using the drill template provided. Do not drill through the panel to the wall as dust will contaminate the circuitry.

Installation Guide

- Never carry out insulation tests on cables connected to electronic equipment.
- **DO NOT OVER TIGHTEN TERMINAL CONNECTOR SCREWS**
- Always use the correct type of cables specifically designed for the operation of fire detection and alarm circuits.
- Always adhere to volt drop limitation when sizing cables
- Always observe polarity throughout. Non colour coded conductors should be permanently identified.
- Screen continuity must be maintained throughout the entire loop circuit including at each junction point and at each device, terminals are provided on each device to facilitate this.
- The screen should be earthed at the connection point provided at the Panel and not at any other point. Both the loop start and the loop end must be connected to the appropriate earthing points.
Care must be taken to avoid connecting the screen to the earthed body of any metal devices, enclosures or cable containment. The screen or drain wire of the loop cables should not be considered as safety earth and therefore should not be connected to terminals marked with the earth symbol, except at the panel, and should not be insulated with green and yellow sleeving.
- The Panel utilises intelligent soft addressing technology to greatly simplify the installation and commissioning processes. Once the system has been installed and the autolearn menu selected, the control panel will automatically scan the detection loops and allocate each device with an address number corresponding with its position on the loop, this avoids the traditional need for manual addressing of the system devices which is time consuming and provides a potential for error.
- It is of vital importance that accurate details are kept of the exact wiring route in order to determine which address has been allocated to each device.

This example can be seen again and more clearly in Appendix (A) System Wiring



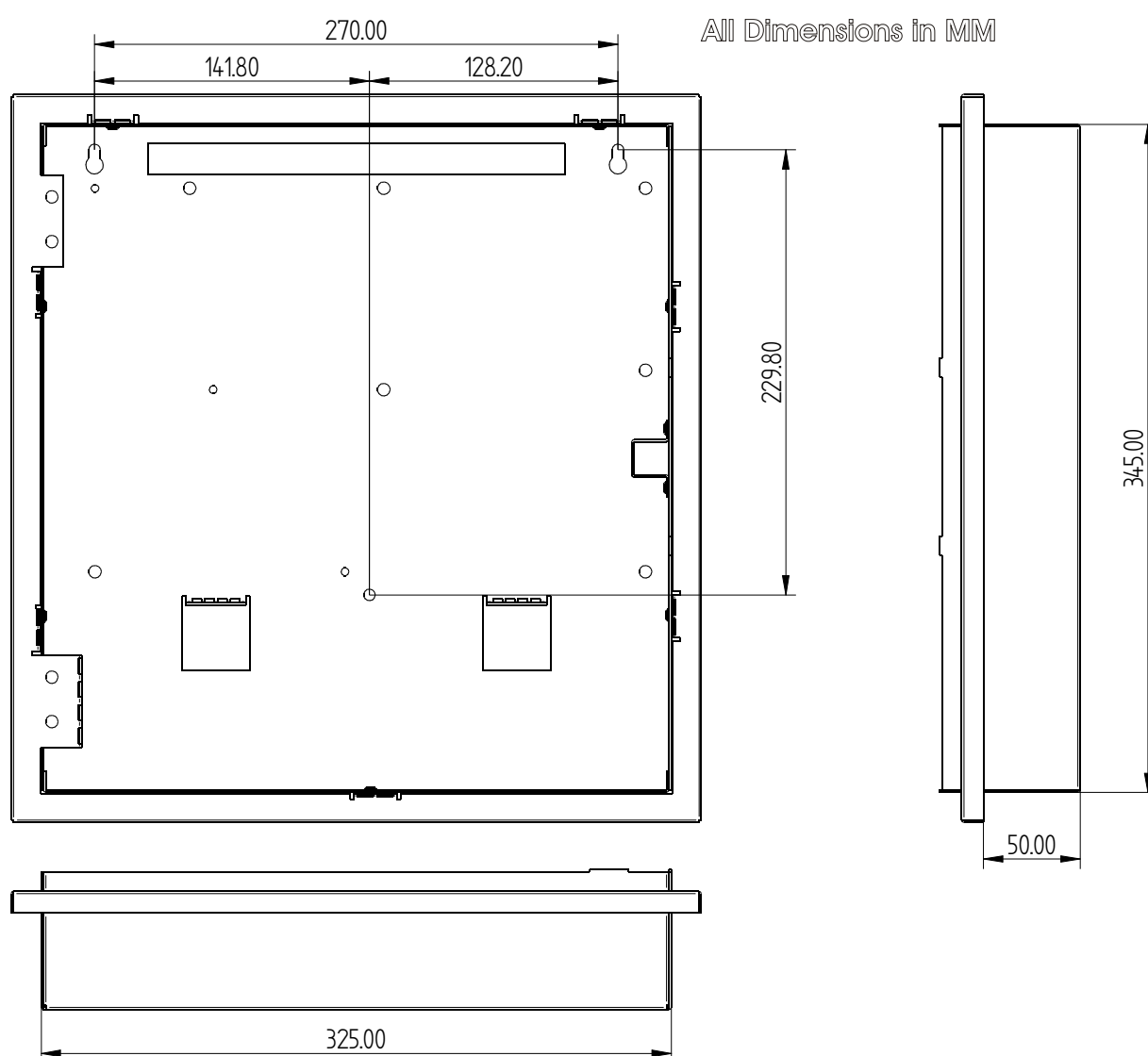
Fixing details

Read all the installation instructions before commencing with the installation. The installation of this panel must be carried out by a suitably qualified /trained person. The installation must comply with IEE wiring regulations and with BS5839 part 1 2002

The electronic components within the fire panel are Static Sensitive. Do not touch the electronics directly.

Mounting the Backbox

The Panel can be surface mounted and recessed . To surface mount; drill three holes and fix the backbox to the wall using suitable screw fixings.



Installing Cabling

Once the backbox is mounted the next stage is to install the power and loop cables and fit the glands.

External Connections

Mains Supply

The mains supply should be installed in accordance with the current edition of the IEE wiring regulations. Connection to the mains supply must be via an isolating device (e.g. an isolating fuse) reserved solely for the fire alarm system. The cover should be coloured red and labelled "FIRE ALARM - DO NOT SWITCH OFF". The isolating protective device should be secure from unauthorised operation and ideally installed in a securely closed box with a breakable cover.

An additional warning label should be provided, depending on whether:-

a) The isolating protective device is fed from the live side of the main isolating device in which case the label on the isolating protective device, should read in addition - "WARNING: THIS SUPPLY REMAINS ALIVE WHEN THE MAIN SWITCH IS TURNED OFF". A further label should be placed on the main isolating device reading "WARNING: THE FIRE ALARM SUPPLY REMAINS LIVE WHEN THIS SWITCH IS TURNED OFF.

Or

b) If the isolating protective device is fed from the dead side of the main isolating device, a label should be fixed to the main isolating device reading "WARNING: THIS SWITCH ALSO CONTROLS THE SUPPLY TO THE FIRE ALARM SYSTEM".

Distributed Power Supplies

The above also applies to any distributed power supply (i.e. mains connections for Repeater Panels , Sounders Controller Units, etc.)

Cable Segregation

All cables for the fire alarm system should be segregated from any other cables/wiring/services.

Wiring configurations

Spurs can be taken off the loop in the following ways:

- 1) The Zone Monitor Interface - Allows up to 20 conventional smoke detectors and unlimited Cooper call points.
- 2) The Spur Isolator Unit - Allows a zone of analogue Sensors and call points to be directly spurred off the loop.

Networking

Up to One Hundred & Twenty Six Panels or repeaters can be networked together to operate as a single networked system. To achieve this each panel must be fitted with a network card (Optional Extra)

When operating as a networked system all fire and fault event information is displayed at every panel, silencing and resetting of alarms can also be carried out from any panel on a networked system if panels are suitably configured.

Networked panels are connected using a loop topology as illustrated.

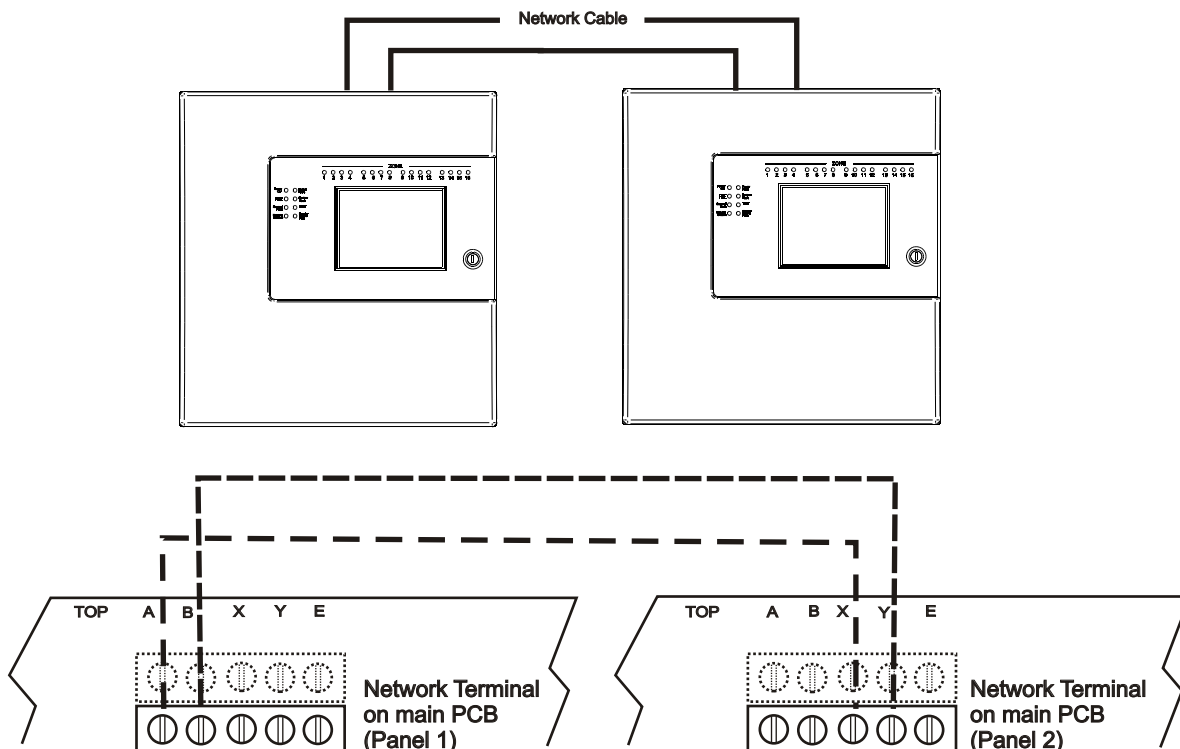
Networked panels can be used as active repeaters, alternatively a low cost passive repeater is available.

This can either be connected a loop of an individual panel or it can be connected to the network.

The recommended network cable for the network connection between panels is an enhanced Firetuf cable Manufactured by Draka cables (part number 910234.)

Screen continuity must be maintained throughout the entire network circuit including at each junction point. The screen should only be earthed at the connection point provided at the first panel and not at any other point. The screen or drain wire of the network cable should not be considered as a safety earth and therefore should not be connected to terminals marked with the earth symbol, except at the panel, and should not be insulated with green and yellow sleeving

Where the network cable passes between buildings, screen continuity should not be maintained from building to building. A booster device must however be used irrespective of cable length and should be fitted at a suitable point in the link between buildings. The cable screen should be connected to the earth of one panel in each building. 102 Ω terminator should be fitted at the beginning and the end of the network. If the distance in the network exceeds 1KM the booster should be used. The booster requires 24V local supply, which can be connected to nearest Addressable Panel



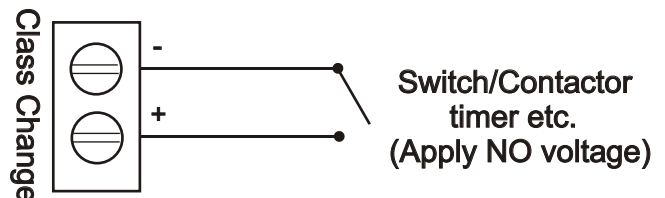
Input/Outputs

PANEL INPUTS

Class Change: (OPTION NOT REQUIRED BY EN54)

A pair of terminals are provided for class change. By shorting these terminals together (e.g. Switch, Time clock) the alarm will sound (Panel sounders + loop sounders only). The Panel will not indicate a Fire. The alarm will cancel when the short circuit is removed. If the short circuit is not removed the alarms will not cancel.

WARNING: NO VOLTAGE SHOULD BE APPLIED TO THIS INPUT



PANEL OUTPUTS

Panel Sounders: (OPTION 7.8 EN54 PT 2)

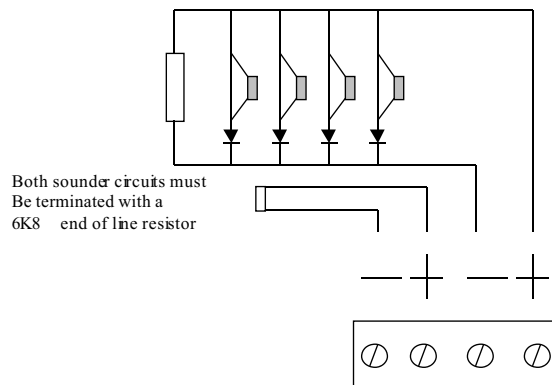
Two pairs of outputs are provided. ONLY polarised equipment should be used. Ensure the polarity of the connections are observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

The total alarm load across all sounder outputs = 1.5 Amp

All outputs are fused with 1.6 Amp Glass fuse Alarm devices should be spread equally across the 4 sounder circuits.

WARNING: DO NOT EXCEED THE RATED OUTPUT CURRENT

All Sounders must be polarised



OUTPUT FIRE ALARM ROUTING EQUIPMENT (OPTION 7.9 EN54 PT 2)

This output, which is fused and monitored using a 6.8k end of line resistor, is used for the automatic transmission of the fire signals to fire alarm routing equipment (e.g. Fire brigade). It operates by providing 12 Volt output to an auxiliary device (e.g. relay).

It is current limited to 30 mA using a resettable polyswitch.

Class change and test conditions do not operate this output. If operated under a fire alarm condition, the indication will be displayed on the Touch screen display and will remain until the fire alarm is reset.

Ensure the polarity of the connections are observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

Input/Outputs

OUTPUT TO FIRE ALARM PROTECTING EQUIPMENT (OPTION 7.10 EN54 PT 2)

This output, which is fused and monitored using 6.8k end of line resistor is used for the transmission of the fire signals to controls for automatic fire protecting equipment (e.g. Door release units etc).It operates by providing 24 Volt output to an auxiliary device (e.g. relay).

It is current limited to 30 mA using a resettable polyswitch.

Class change and test conditions do not operate this output. If operated under a fire alarm condition , this output remains activated until the fire alarm is reset.

Ensure the polarity of the connections is observed at all times and end of line resistors (6K8 5%) are fitted for correct operation. All activated devices must be polarised.

OUTPUT TO FAULT WARNING ROUTING EQUIPMENT (OPTION 9.4.1C EN54 PT 2)

This output, which is fused and monitored using 6.8k end of line resistor is used for the transmission of fault signals to fault warning routing equipment This output is monitored using 6k8 end of line resistor and it current limited to 30 mA.

Under normal conditions it operates by providing 24vdc which can be connected directly to a 24v auxiliary device(relay).It is current limited to 30 mA.

Under fault conditions or even if the Panel is switched off, this output will switch to 0 volts. Ensure the polarity of the connections is observed at all times and end of line resistors (6K8 5%) are fitted for correct operation.

Auxiliary Relay (OPTION NOT REQUIRED BY EN54)

This output is a volt free contact, which is protected by a polyswitch. It is rated at 24 Volts 1Amp. If operated under a fire alarm condition , this output will remain energised until the fire alarm is reset

AUXILIARY DC OUTPUT (OPTION NOT DEFINED BY EN54)

A 24 Vdc output is provided. This output is protected by a polyswitch. This output can be used to power fire or fault auxiliary equipment. Please ensure that all equipments connected to this output will only draw current when a fire condition exists.

WARNING:- DO NOT EXCEED THE RATED OUTPUT CURRENT

Mimic Output (OPTION NOT REQUIRED BY EN54)

This RS485 output is used to send data to a mimic display or a repeater panel. The maximum distance is 2km.

Maintenance

Functions: See User Manual for full details.

Daily Inspection

Check that only the green “POWER ON” indicator shows. Inspect for any fault indication. Notify any faults to a system supervisor.

Weekly Test

Check indicators.

Press Supervisor mode on the top left of the touch screen. Enter passcode.

Select “others” tab. Press the button labeled weekly test, confirm you wish to perform the test and the amber “System Test” LED will light. The panel will stay in the weekly test mode for 5mins before resetting. During the weekly test, trigger a smoke detector or call point and check the fire panel registers the device and illuminates the correct zonal indicator. Trigger a different device every time a weekly test is performed ensuring devices are tested in rotation until all have been checked. It is advisable to develop a detailed a building plan highlighting devices and locations to aid testing. The panel will reset automatically once the 5mins have elapsed. If no devices are triggered during the weekly test the panel will abort the test and reset after 5mins. Record weekly test in the table provided in this log book.

Quarterly

Check all previous log book entries and verify that remedial action has been taken. Carry out the weekly test. Visually examine the batteries and their connections, by loosening the screws behind printer door and opening the hinged front from the right hand side.

Disconnect the mains supply and check that the battery is capable of supplying the alarm sounders, by operating a call point.

Annual Test

As Weekly Test and Quarterly Test above. Additionally test all sensors and call points and check operation.

Every 2-3 Years

Replace or return the smoke detectors for cleaning to ensure correct operation and freedom from false alarms. Special equipment is required for cleaning smoke detectors.

Every 5 Years

Replace sealed lead acid battery.

Cleaning: When cleaning the panel, use a moist cloth. Do not use solvents or harsh abrasives.

Printer Paper Order Code: OPTION NOT AVAILABLE

Section 2

Commissioning

Commissioning

Commissioning mode

Walk test mode allows a single engineer to test the various detectors and call points on a system without always having to return to the panel either to reset the system or silence the alarms. When in COMMISSIONING MODE, the system operates as normal except that when a detector or call point goes into alarm, the alarms only operate for a few seconds and then will silence. The panel then tries to reset the device automatically and, if successful, the alarms are operated again for a few seconds and the installation engineer can move on to the next detector. After a full test has been carried out the engineer can check the order in which the detectors/call points were operated using the DISPLAY LOG mode. This information can also be printed on the optional printer.

For details of how to access commissioning mode, please refer to page 53

When the panel is in "Walk Test Mode" the control panel inserts a different code into the log and also onto the print-out. This is to distinguish between when a device has been tested in "Walk Test Mode" and when a device has been triggered while in normal operation.

The following differences will occur:

- a) When in the LOG mode, "One man walk test" will appear on the display followed by the address text and device type.
- b) On the printout a "One man walk test" message will appear followed by the address text and device type.
- c) During a real fire "FIRE !" Will appear on the display followed by the address text and device type.

Configuration

DB Level Check

Panel includes the facility to test and set the system sounders with the minimum amount of disturbance. In sounder test mode, the sounders will sound for 30 seconds on then 30 seconds off. This facility can be accessed via the engineering menu.

Detector LED Flashing

The Panel Sensor flashing function is used to allow a visual inspection and confirmation that the fire panel is in communication with the installed system devices. This facility can be accessed via the engineering menu and can be switched on or off at any time as required.

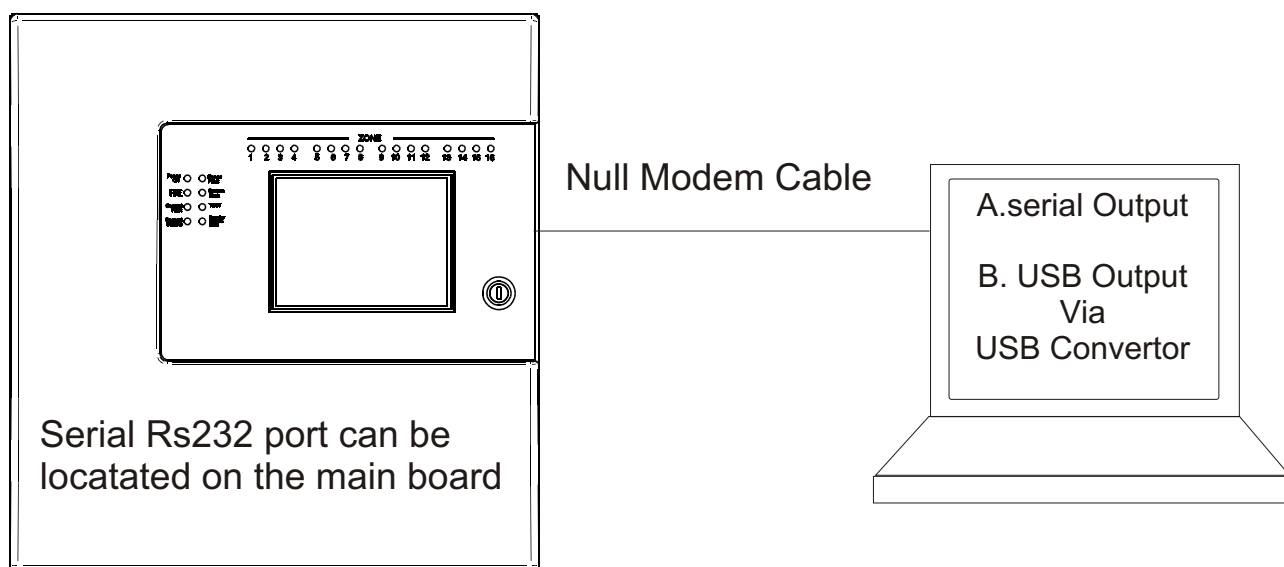
Up/downloading using PC Software

The PC Software enables the address, location text, device type and any comments to be downloaded to the panels.

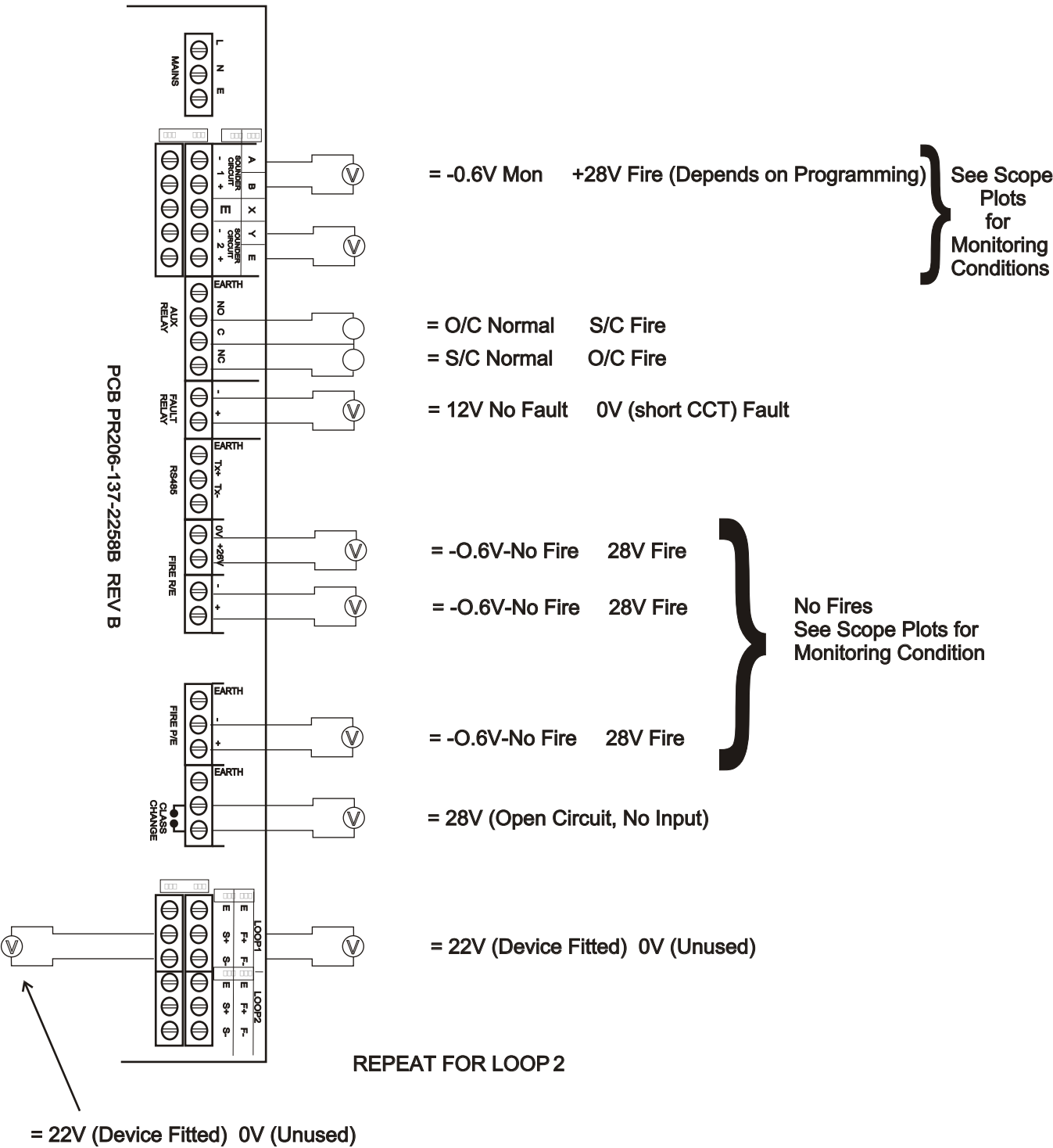
The software can download to all 126 networkable Panels.

The PC is connected to each Panel on the network in turn. All data for the Panel is downloaded.

For networked systems, panels are identified by panel number, P1, P2 etc.

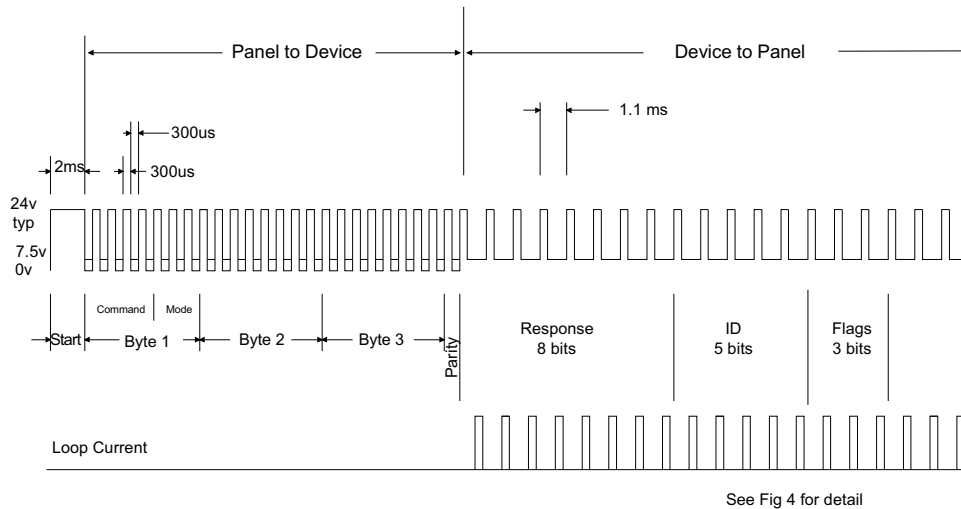


Panel Fault Finding



Protocol Format

Fig. 1 Full Protocol Format (Not including Repeaters)



Each Packet of Comms above must be separated by a gap of 20ms minimum where the line is held at 24v

Normal Communications to Devices:

With the command bits set for the 'Normal' command and the MSB of the three mode bits set at 0, this shortened version of the Normal communications to each device allows the analogue reply or status from each device to be read. This format of communication is generally used throughout all background supervision of the addressable loop.

Alarm Interrogate Command:

This command is seen by all devices on the loop, so no address byte is required, and is periodically sent out during normal communications. This command allows any device experiencing an alarm condition to respond, with call points given the highest priority, reporting their address. This causes the control panel to break off from general background supervision of the loop and focus directly on the device in question.

Full Protocol Format:

With the command bits set for the 'Normal' command and the MSB of the three mode bits set at 1, the long version of the Normal communications can be sent to any device. This would normally be done by the panel following a response to the Alarm Interrogate command, allowing the panel to check the device address, ID and confirm that the analogue reply, or status, is truly an alarm condition before actioning the panel sounder outputs, for example.

Viewing the Voltage and Current waveforms at the panel:

Loop 1: Using a Digital Storage Oscilloscope, connect one channel to R34 on the Loop Driver Card; probe 0V clip to the 'in-board' side of the resistor; I/P to the 'out-board' side. This will display the loop current.

Connect the other channel to Loop 1, S+ terminal on the main mother board. DO NOT connect the 0v clip of this probe.

Loop 2: Using a Digital Storage Oscilloscope, connect one channel to R?? on the Loop Driver Card; probe 0V clip to the 'in-board' side of the resistor; I/P to the '?????????' side. This will display the loop current.

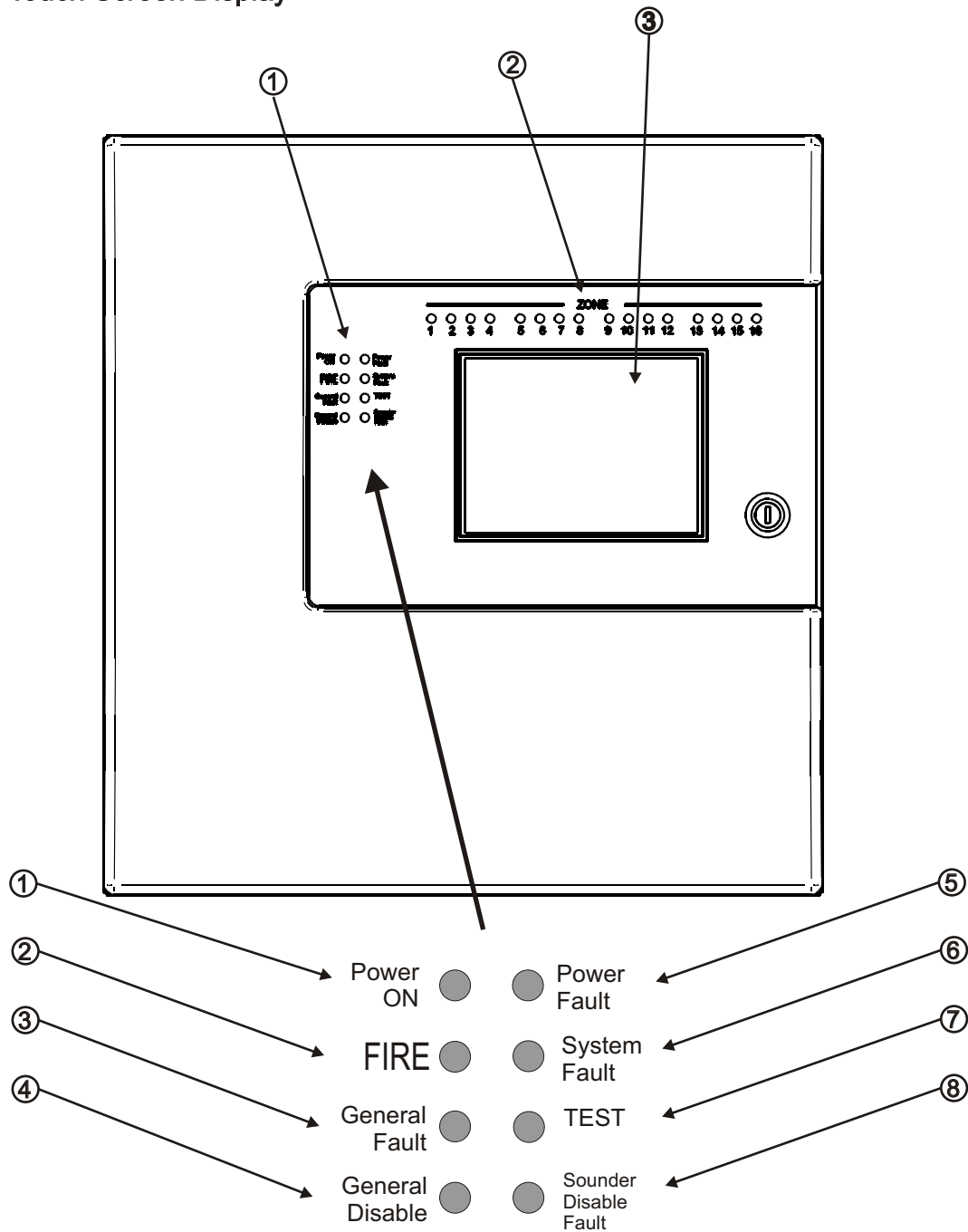
Connect the other channel to Loop 2, S+ terminal on the main mother board. DO NOT connect the 0v clip of this probe

Section 3

Panel Controls & Indicators

Panel Controls & Indicators

- 1. System LED's
- 2. Zonal LED's
- 3. Touch Screen Display



LED	Name	Function	Action
1	Power On	Shows Panel is On	Check Indicator is Illuminated
2	Fire	Indicators Panel has Detected a Fire	Impliment Fire Action Procedure
3	General Fault	Monitors Devices for Faults e.g. Smoke detectors/Sounders	Report to System Supervisor
4	General Disable	Monitors Fire Panel for Faults	Report Fault to Service Dept
5	Power Fault	Monitor Internal Battery Charger	Report Fault to Service Dept
6	System Fault	Monitors Fire Panel for Faults	Report Fault to Service Dept
7	Test	Supervisor/Engineer is Testing the Systems	Report to System Supervisor
8	Sounder	Indicates the Sounder Status	Check with System Supervisor

Touch Screen Display

Supervisor FRE Off	Fires 0	Pre Alarms 0	Faults 0	Disabled 0
<div>System Healthy XX Zones Active</div> <div>Tuesday dd-mm-yyyy</div> <div>16:25.25 BST On</div>				

The Touch Screen is a multi-function display consisting 320x240 dots featuring high intensity backlighting. In normal operation, the display indicates as above with the backlighting off.

During an event on the system the display shows the FIRST EVENT and LAST EVENT plus other events as space allows.

The last 2 lines are normally used to display the total number of events, but they are also used for scrolling fire conditions, faults, pre alarms or disabled devices independently or for displaying a reduced menu when in fire condition.

When an event occurs the Touch Screen backlighting comes on unless there is a mains power supply fault.

Use the Touch Screen to scroll through all active events on the system by using the SCROLL UP and SCROLL DOWN buttons (available at access level 1). You can display the contents of the log and also view details of any fires, faults, pre-alarms,faults or disablements.. When displaying the system menu on the Touch Screen, the last 5 lines of the display are shown in reverse text.

Panel Operation

The Panel is operated via a backlit touch screen. The default fire screen is shown below. From this screen all the panels functions can be operated. The first time you touch the screen the backlight will illuminate the panel.

Supervisor FRE Off	Fires 0	Pre Alarms 0	Faults 0	Disabled 0
<div>System Healthy XX Zones Active</div> <div>Tuesday dd-mm-yyyy</div> <div>16:25.25 BST On</div>				

Pressing a field will highlight it and forward to the next screen as shown below.

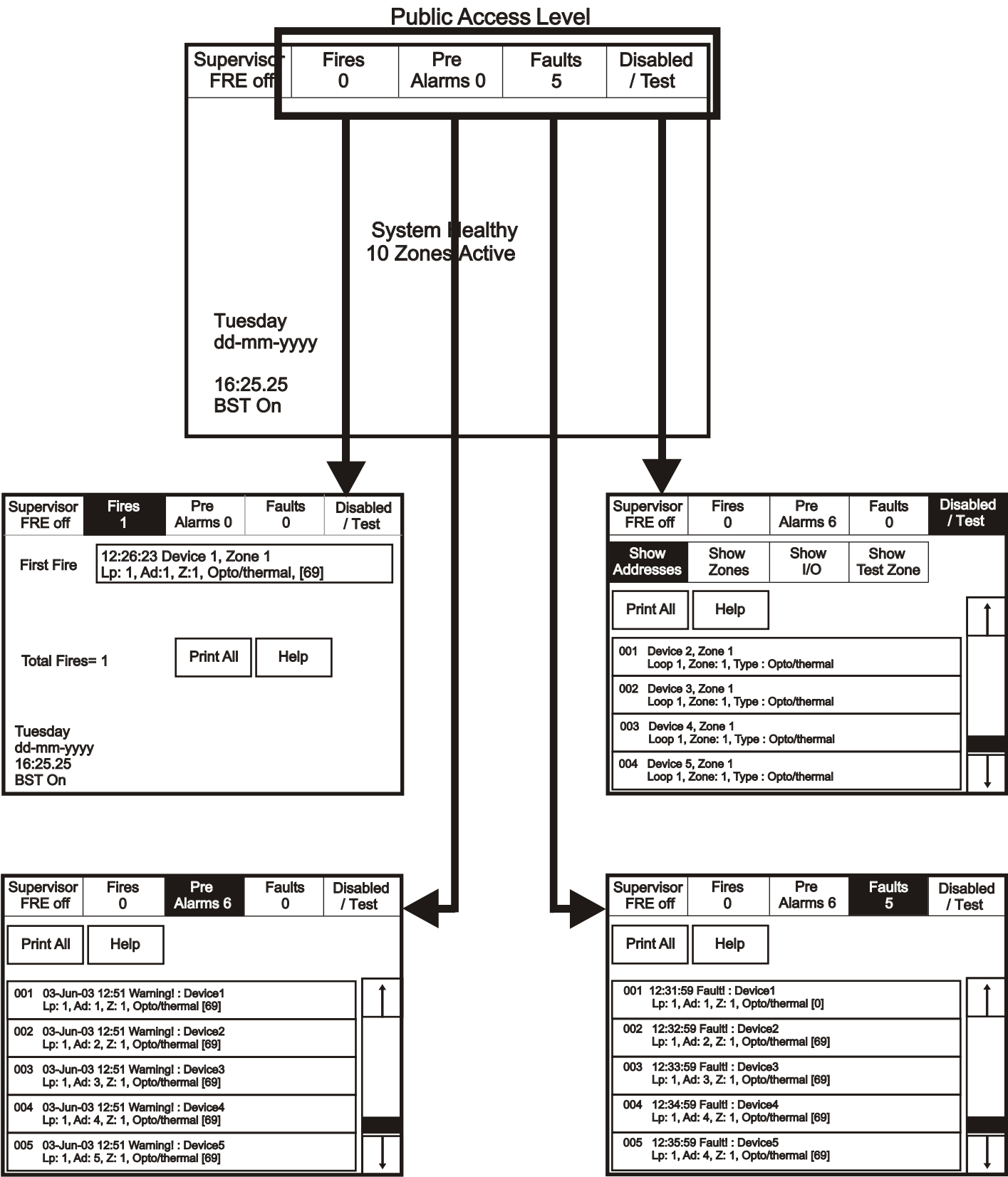
Touch the screen here to view details

Supervisor FRE Off	Fires 1	Pre Alarms 0	Faults 0	Disabled 0
<div>System Healthy 10 Zones Active</div> <div>Tuesday dd-mm-yyyy</div> <div>16:25.25 BST On</div>				

Supervisor FRE Off	Fires 1	Pre Alarms 0	Faults 0	Disabled 0
<div>First Fire<div>Meeting Room 1, Building 1, 1st floor Loop: 1, Zone: 2, Type: Optical</div></div> <div>Total Fires= 1<div>Print All</div><div>Help</div></div> <div>001 FIRE! Meeting Room 1, [Optical] (Ana = 169) Building 1, 1st floor, Panel 1, Loop1, device 4</div> <div>Tuesday Dd-mmm-yyy 16:25.25 BST On</div>				

Public Access Level 1

Public access level does not require an access code and allows anybody to review the functions outlined below.



Evacuate (Access Level 2)

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode Passcode and select “Evacuate” on the menu at the top of the screen.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
<div>View Fires AC = 0</div> <div>View Pre Alarms</div> <div>Disabled</div> <div>Faults</div> <div>Others</div>				

Select “Yes” to evacuate the building.

This will activate ALL sounders
and activate all panel relays
Do you wish to continue?

Yes

No

Silence Alarms

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode Passcode and select “Silence Alarms” button as the top of the screen.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
View Fires AC = 0	View Pre Alarms	Disabled	Faults	Others
I/O		Zone: 0		
Addresses: 0				
Touch button to View list				

Select “yes” to silence Alarm.

This will silence ALL sounders
Do you wish to continue?

Yes

No

Mute Buzzer

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode and Select “Mute Buzzer” from the Top Menu

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
View Fires AC = 19	View Pre Alarms	Disabled	Faults	Others
Enable/Disable		Weekly Test		
Print		View Log		
Lamp Test		Check Config.		

Reset

Enter the Supervisor Mode and Select “Reset” from the top Menu. Select “Yes” to reset the panel.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
View Fires AC = 19	View Pre Alarms	View Disabled	View Faults	Others
001 14:22:49 Mains Failure				
Faults = Short circuits, broken detectors etc. To remove faults from this list: 1) Fix Fault 2) Reset Panel				



This will Reset the Panel
Do you want to continue?

Yes

No

Pre-Alarms

Enter the Supervisor Mode and Select “Pre-Alarms” tab.

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
<div>Fires AC = 0</div> <div>Pre Alarms</div> <div>Disabled</div> <div>Faults</div> <div>Others</div>				
Pre-alarm = Some smoke /heat but below fire threshold These warnings will appear and disappear				

A pre-alarm is shown when a detector appears to register heat or smoke but in a quantity that is insufficient to warrant an alarm.
Pre-alarm may indicate a build up of dirt in a smoke detector which can be interpreted by the detector as smoke presence.

Disabled Devices

Enter the Supervisor mode and Select the “Disabled” tab.

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
<div>Fires AC = 0</div> <div>Pre Alarms</div> <div>Disabled</div> <div>Faults</div> <div>Others</div>				
I/O		Zone: 0		
Addresses: 0				
Touch button to View list				

The individual buttons show which devices and the number of devices which have been disabled. Press one of the buttons to display detailed information for a particular category

Faults

Enter Supervisor Mode Passcode and select “Faults” tab.

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Fires AC = 0	Pre Alarms	Disabled	Faults	Others
Pre-alarm = Some smoke /heat but below fire threshold These warnings will appear and disappear				

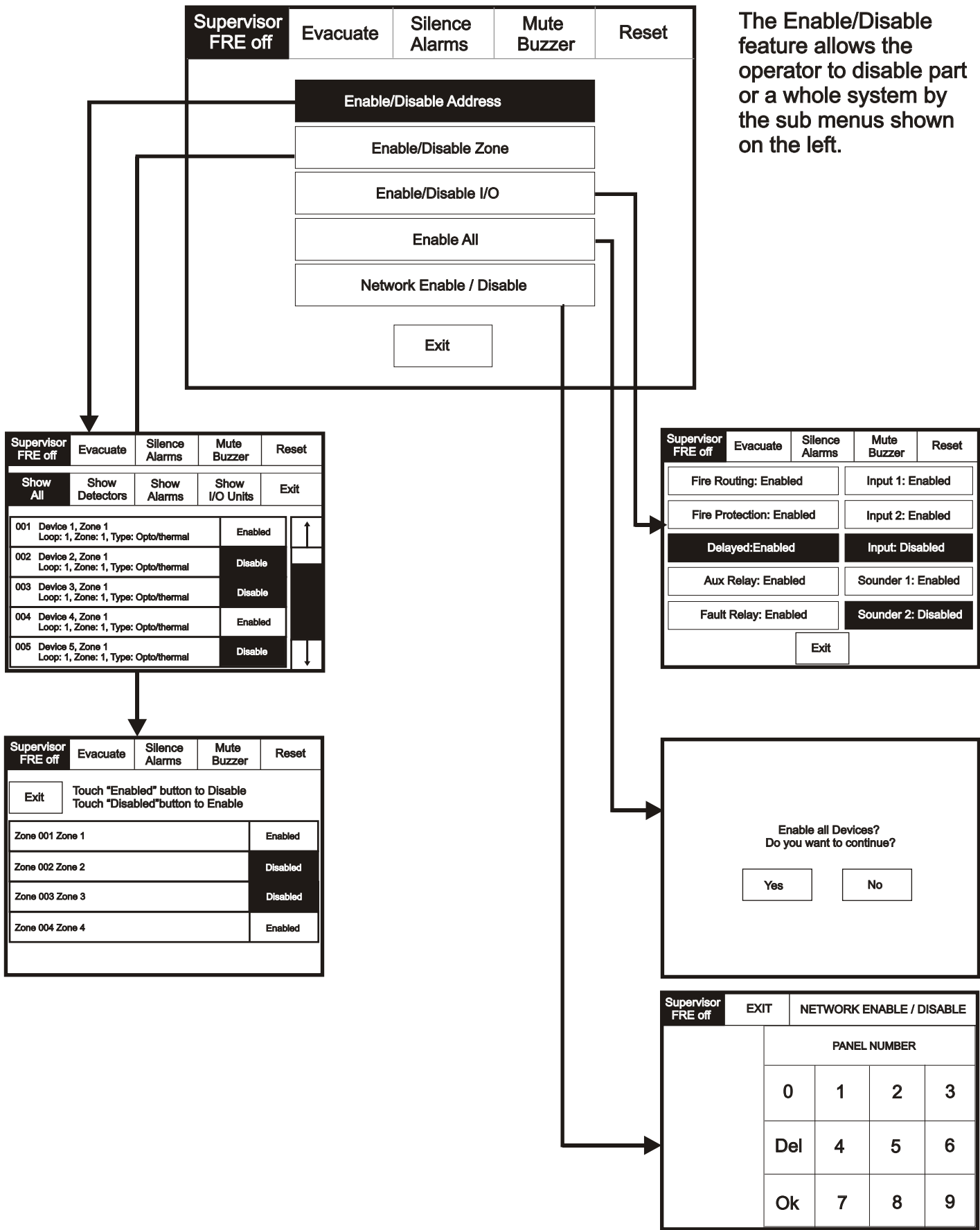
Enable/Disable (others Menu)

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode passcode and select the “Others” tab.

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset						
Fires AC = 0	Pre Alarms	Disabled	Faults	Others						
<table><tr><td>Enable/Disable</td><td>Weekly Test</td></tr><tr><td>Print</td><td>View Log</td></tr><tr><td>Lamp test</td><td>Check Auto Config.</td></tr></table>					Enable/Disable	Weekly Test	Print	View Log	Lamp test	Check Auto Config.
Enable/Disable	Weekly Test									
Print	View Log									
Lamp test	Check Auto Config.									

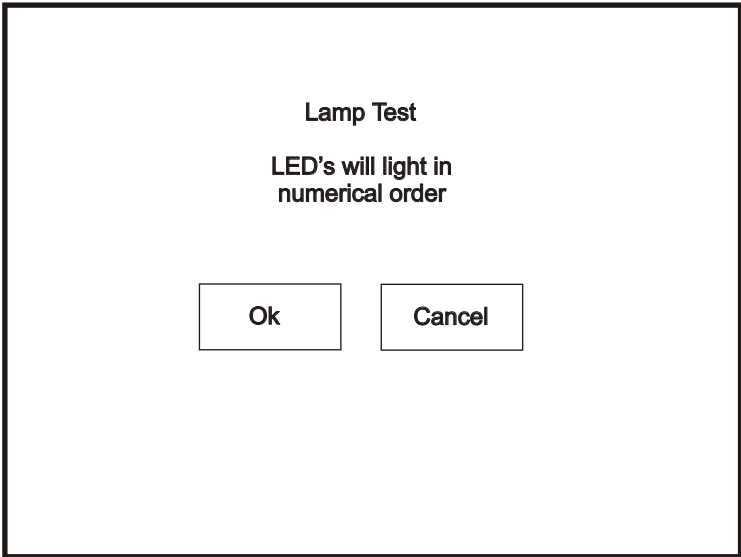
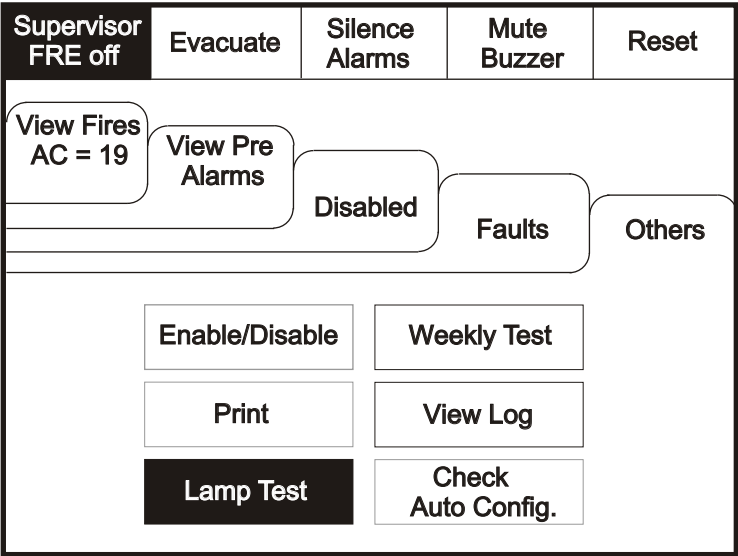
Enable/Disable



Lamp Test

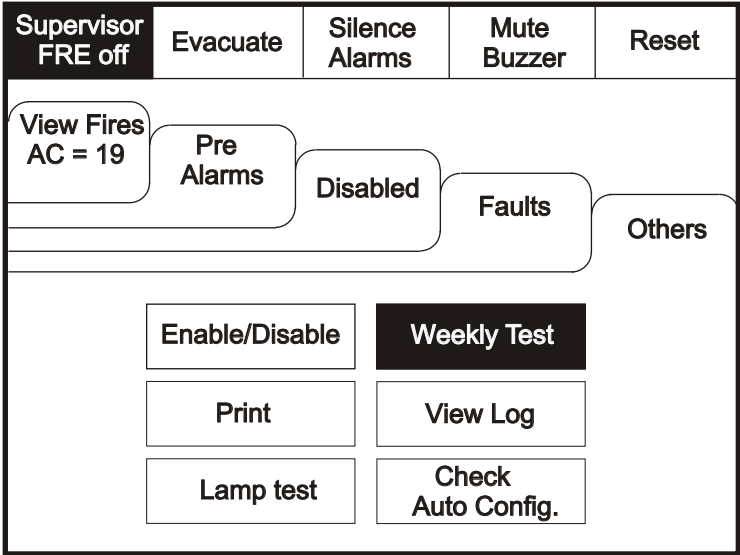
To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode and Select the “Others” Tab. Press “Lamp Test”

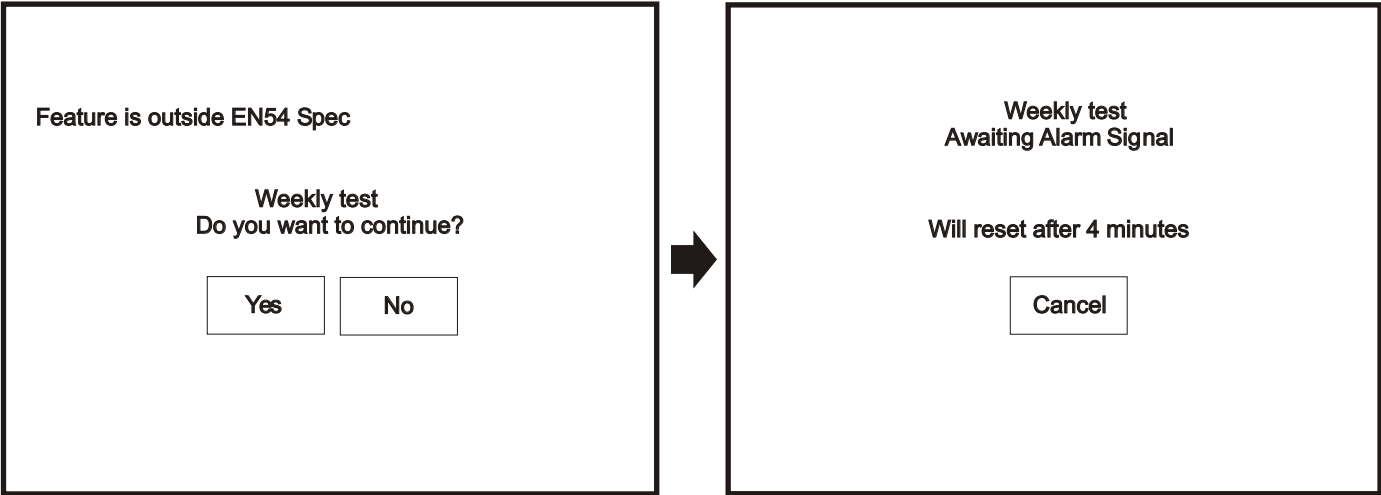


Weekly Test

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode. Select the others tab as shown below. Press Weekly test.



Weekly test is now in progress.

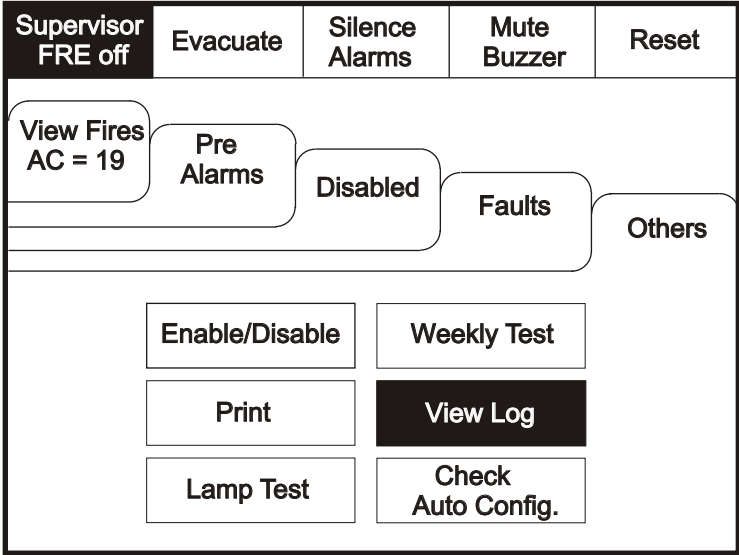


The panel will automatically return to the system healthy screen once the weekly test has been completed.

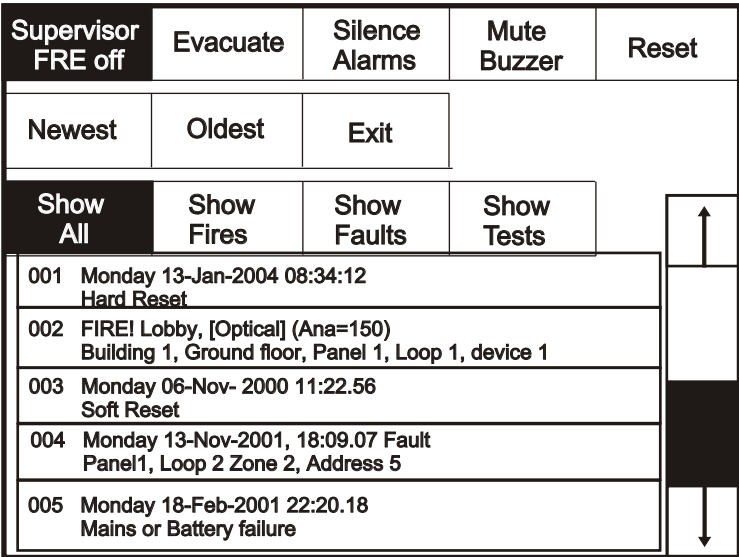
Viewing Events

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode Passcode. Select the “Others” tab and press View Log.



Use the scroll bar to view the list of upto 1000 events.



The Panel event log stores up to 1000 events including, fires, faults, resets and address changes. Once the maximum 1000 events has been reached Panel will automatically overwrite the oldest event every time a new event is stored. The event log can only be reset by an approved service engineer.

Check Auto Config

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode and Select the “Others” Tab. Press Check Auto Config. This feature will scan the loop and pinpoint the exact location of any break in the loop wiring and will also identify any changes in the loop configuration (e.g. New devices added or changed device types).

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Fires AC = 0	View Pre Alarms	Disabled	Faults	Others
Enable/Disable		Weekly Test		
Print		View Log		
Lamp test		Check Auto Config.		

Supervisor FRE Off
Check Auto Config
Replace Device
Exit

Supervisor FRE Off	
Check Auto Config	
Yes	No

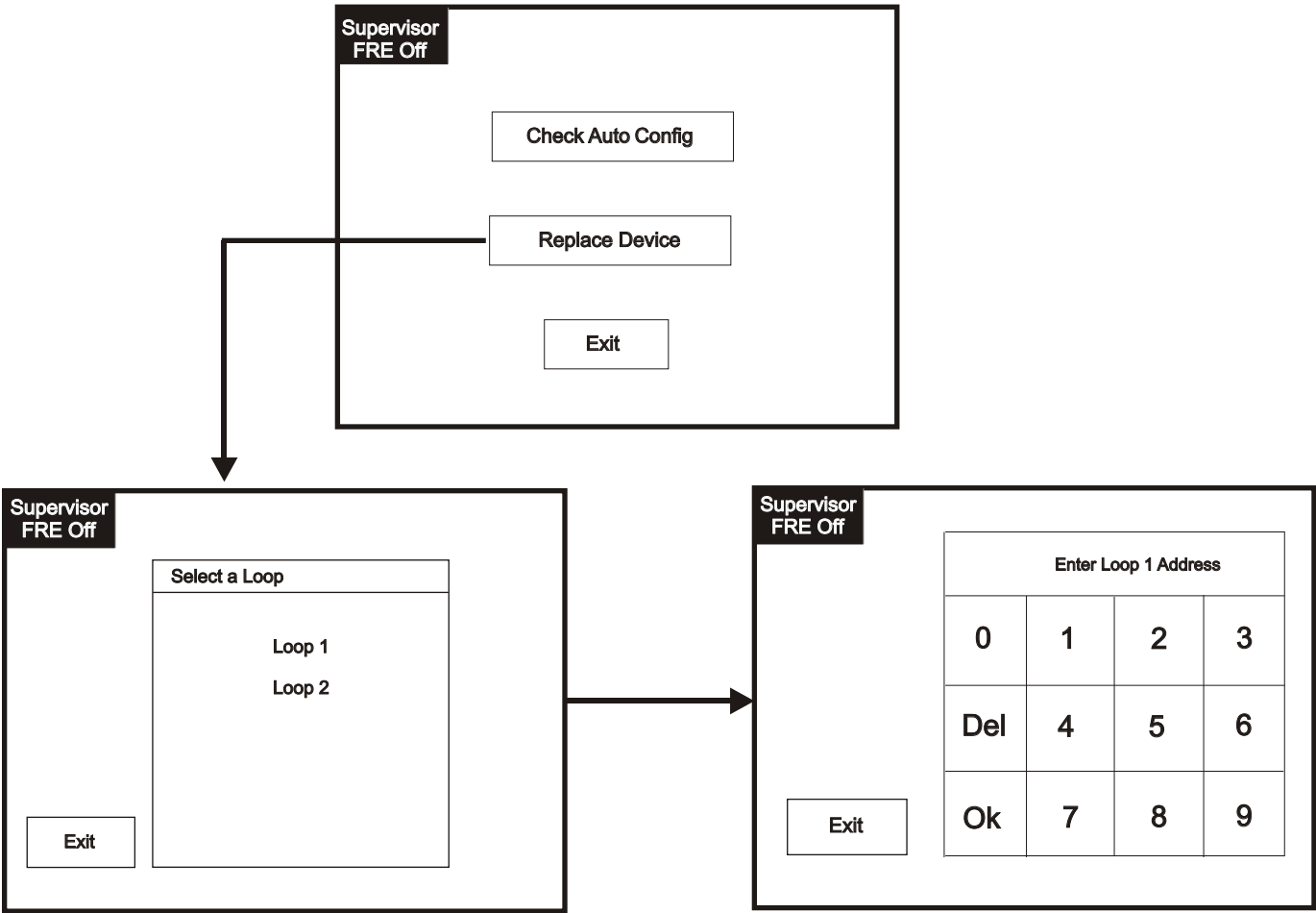
Press the Supervisor Mode button at the top left of the screen.

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Print	Exit			
None Found				
Any device listed above is not correctly configured				

Replace Device

Replace device enables an existing device to be replaced with a new device without losing the existing text and sounder programming.
Replace a single device then use the replace device menu to allocate an existing address to the new device

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Fires AC = 0	View Pre Alarms	Disabled	Faults	Others
Enable/Disable		Weekly Test		
Print		View Log		
Change Device		Check Auto Config.		



Test Device (Access Level 3)

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the service mode touch the supervisor button and enter supervisor passcode.

Service FRE Off			Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Enter the Service mode. Select “Test”.

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Test Device</div> <div>Test Zone</div> <div>Sounder Level Test Mode</div> <div>One Man Walk Test</div> <div>Global Flashing LED on/off</div>				

Select the “Test Device” button.

Touch row to select device to test.

Service FRE Off	Exit	Go to		Reset
Touch row to test				
Show All	Show Detectors	Show Alarms	Show I/O Units	
001 Lobby, Build 1, 1st floor Loop: 1, Zone: 2, Type: Optical				↑
002 Main Reception, Building 1, 1st floor Loop: 1, Zone: 2, Type: Optical				
003 Storage/archive, Building 1, 1st floor Loop: 1, Zone: 2, Type: Optical				
004 Meeting Room 1, Building 1, 1st floor Loop: 1, Zone: 2, Type: Optical				↓



Testing Device Testing Address: A	
Stop	Stop

Test Zone

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode, Select “Test” and on the Screen Shown Below Press “Test Zone”

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Test Device</div> <div>Test Zone</div> <div>Sounder Level Test Mode</div> <div>One Man Walk Test</div> <div>Global Flashing LED on/off</div>				

Service FRE Off	Exit			Reset
Touch "-" Button to place a zone into test mode Touch "-" Button to remove a zone from test mode				
Zone 001 Building 1, Ground				↑
Zone 002 Building 1, 1st floor				
Zone 003 Building 1, 2nd floor				
Zone 004 Packing & Stores				
Zone 005 Building 2, basement				↓

Testing Zone: Scanning

Stop

Sounder Level Test Mode

Enter the Service Mode and Select Test. From the Test Menu Select “Sounder Level Test Mode”

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Test Device</div> <div>Test Zone</div> <div>Sound Level Test Mode</div> <div>One Man Walk Test</div> <div>Global Flashing LED On/Off</div>				

Sound Level Test Mode

Do you want to continue?

Yes

No

Sound Level Test Mode

All sounders will now pulse
15 seconds on, 30 seconds off

Touch “Stop” button to stop test

Stop

Global Flashing LED On/Off

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Test.

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

If global LED flashing is set to on, all device LED's will pulse intermittently to confirm correct communication.

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Test Device</div> <div>Test Zone</div> <div>Sound Level Test Mode</div> <div>One Man Walk Test</div> <div>Global Flashing LED On/Off</div>				

Select "Global Flashing LED On/Off" from the Test Menu Screen.

Global flashing LED on/of

Flashing

Off

One Man Walk Test

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Test.

Service FRE Off	Exit		Mute Buzzer	
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Test Device</div> <div>Test Zone</div> <div>Sound Level Test Mode</div> <div>One Man Walk Test</div> <div>Global Flashing LED On/Off</div>				

Select “One Man Walk Test” from the Test Menu Screen.

Feature is outside EN54 spec

One Man Walk Test

Do you want to continue?

Yes

No

One Man Walk Test

Awaiting Alarm Signal

Stop

Commission: Auto Learn

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Load CDR from Laptop</div> <div>Analogue Level</div> <div>Download CDR to Laptop</div> <div>Printer Settings</div> <div>Auto Learn</div> <div>Change Panel Number</div> <div>Erase Log and Reset</div> <div>Number of Panels in Network</div> <div>System Detail</div> <div>Screen Cover</div> <div>Load logo from PC</div> <div>Italian Mode</div>				

Select “Auto Learn” from the Configure Menu Screen.

Auto Learn	
This will erase the current CDR Do you want to continue	
Yes	No

Important:

Activating autolearn will erase all existing programming, text and configuration data.

Erase Log

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
Load CDR from Laptop		Analogue Level		
Download CDR to Laptop		Printer Settings		
Auto Learn		Change Panel Number		
Erase Log and Reset		Number of Panels in Network		
System Detail		Screen Cover		
Load logo from PC		Italian Mode		

Select “Erase Log and Reset” from the Configure Menu Screen.

This will delete all log entries
Do you want to continue

Yes

No

System Details

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission, then Press “System Details”.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
Load CDR from Laptop		Analogue Level		
Download CDR to Laptop		Printer Settings		
Auto Learn		Change Panel Number		
Erase Log and Reset		Number of Panels in Network		
System Detail		Screen Cover		
Load logo from PC		Italian Mode		

Service FRE off	Print	Exit		Reset
Program V0.00.15 Program Data 09-Mar-2004 Program Checksum 0xAA95524 CDR V0.5 CDR Checksum 0xF7D95E Loop Controller 1 V0.0.0 Loop Controller 2 V0.0.0 Panel Number 0 Total Panels 1 Total Addresses 13 Total Zones 4				
<div>Page 1</div> <div>Page 2</div> <div>Page 3</div>				



Service FRE off	Print	Exit		Reset
	Loop 1	Loop 2	Loop 3	Loop 4
Optical	0	0	0	0
Ionisation	13	14	0	0
Thermal A1R	0	0	0	0
Opto/Thermal	0	0	0	0
Thermal BS	0	0	0	0
Thermal CS	2	1	0	0
Call Point	0	0	0	0
Alarm	0	0	0	0
I/O Units	0	0	0	0
<div>Page 1</div> <div>Page 2</div> <div>Page 3</div>				



Service FRE off	Print	Exit		Reset
	Loop 1	Loop 2	Loop 3	Loop 4
Sounder Control Unit	0	0	0	0
Voice Annunciator	13	14	0	0
Repeater	0	0	0	0
ZMU/{SUM	0	0	0	0
Beam Detector	0	0	0	0
Filtrex	2	1	0	0
Access Control	0	0	0	0
Emerg.Light.Module	0	0	0	0
Carbon Monoxide	0	0	0	0
<div>Page 1</div> <div>Page 2</div> <div>Page 3</div>				

Analogue Level

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission then press “Analogue Levels”.

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Commission</div>				
<div>Configure</div>				
<div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
Load CDR from Laptop		Analogue Level		
Download CDR to Laptop		Printer Settings		
Auto Learn		Change Panel Number		
Erase Log and Reset		Number of Panels in Network		
System Detail		Screen Cover		
Load logo from PC		Italian Mode		

Service FRE off	Exit	Goto		Reset
Show All	Show Detectors	Show Optical	Show Ionisation	Show Thermal
001 Device 1, Zone 1 Loop: 1, Zone: 1, Type: Opto/thermal				↑
002 Device 2, Zone 1 Loop: 1, Zone: 1, Type: Opto/thermal				
003 Device 3, Zone 1 Loop: 1, Zone: 1, Type: Opto/thermal				
004 Device 4, Zone 1 Loop: 1, Zone: 1, Type: Opto/thermal				
005 Device 5, Zone 1 Loop: 1, Zone: 1, Type: Opto/thermal				↓

Note
Go to
command can
be used to
jump to a
specific
address

Enter Address	1	2	3
Loop 1 0 - 13	4	5	6
Loop 2 0 - 0	7	8	9
Loop 3 0 - 0	ok	0	←
Loop 4 0 - 0			
Cancel			

Change Panel Number

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission then press “Change Panel Number”

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Load CDR from Laptop</div> <div>Analogue Level</div> <div>Download CDR to Laptop</div> <div>Printer Settings</div> <div>Auto Learn</div> <div>Change Panel Number</div> <div>Erase Log and Reset</div> <div>Number of Panels in Network</div> <div>System Detail</div> <div>Screen Cover</div> <div>Load logo from PC</div> <div>Italian Mode</div>				

Change Panel Number <div>0</div> <div>Cancel</div>	1	2	3
	4	5	6
	7	8	9
	ok	0	←

Number of Panels in Network

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission then press “Number of Panels in

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Load CDR from Laptop</div> <div>Analogue Level</div> <div>Download CDR to Laptop</div> <div>Printer Settings</div> <div>Auto Learn</div> <div>Change Panel Number</div> <div>Erase Log and Reset</div> <div>Number of Panels in Network</div> <div>System Detail</div> <div>Screen Cover</div> <div>Load logo from PC</div> <div>Italian Mode</div>				

Number of Panels in Network 1	1	2	3
	4	5	6
	7	8	9
	ok	0	←
<div>Cancel</div>			

Italian Mode

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
Enter the Service Mode and Select Commission then press “Italian Mode”.

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE Off	Exit		Mute Buzzer	Reset
<div>Load CDR from Laptop</div> <div>Analogue Level</div> <div>Download CDR to Laptop</div> <div>Printer Settings</div> <div>Auto Learn</div> <div>Change Panel Number</div> <div>Erase Log and Reset</div> <div>Number of Panels in Network</div> <div>System Detail</div> <div>Screen Cover</div> <div>Load logo from PC</div> <div>Italian Mode</div>				

Service FRE off	Exit			Reset
<div>T1:Call Point Delay0 mins,0 secs</div> <div>T2:Detector Delay0 mins</div> <div>EnabledDisabled</div>				

Programming I/O and Sounders T1

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Select “Programming I/O and Sounders” from the Configure Menu Screen. Then press T1

Service FRE off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Pascode		Day/Night		

Service FRE off	Exit		Mute Buzzer	Reset
<div>T1</div> <div>T2</div> <div>Panel Outputs</div> <div>Auxiliary Board</div> <div>Alarm Verification Features</div>				

T1					
Off					
10 secs	20 secs	30 secs	40 secs	50 secs	60 secs
70 secs	80 secs	90 secs	100 secs	110 secs	120 secs
130 secs	140 secs	150 secs	160 secs	170 secs	180 secs
Exit					

Programming I/O and Sounders T2

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Select “Programming I/O and Sounders” from the Configure Menu Screen. Then press T2

Service FRE off	Exit		Mute Buzzer	Reset
<div>Programming I/O and Sounders</div> <div>Add/Delete</div> <div>Change Date/Time</div> <div>Configure Heat Detectors</div> <div>Change Text</div> <div>Network</div> <div>Configure Zones</div> <div>Language</div> <div>Change Pascode</div> <div>Day/Night</div>				

Service FRE off	Exit		Mute Buzzer	Reset
<div>T1</div> <div>T2</div> <div>Panel Outputs</div> <div>Auxiliary Board</div> <div>Alarm Verification Features</div>				

T2				
Off				
1 min	2 min	3 min	4 min	5 min
6 min	7 min	8 min	9 min	10 min
Exit				

Programming I/O and Sounders . Panel Outputs

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Service FRE off	Exit		Mute Buzzer	Reset
<div>Programming I/O and Sounders</div> <div>Add/Delete</div> <div>Change Date/Time</div> <div>Configure Heat Detectors</div> <div>Change Text</div> <div>Network</div> <div>Configure Zones</div> <div>Language</div> <div>Change User Code</div> <div>Day/Night</div>				

Select “Programming I/O and Sounders” from the Configure Menu Screen.

Service FRE off	Exit		Mute Buzzer	Reset
<div>T1</div> <div>T2</div> <div>Panel Outputs</div> <div>Auxiliary Board</div> <div>Alarm Verification Features</div>				

Press panel outputs - NOTE Interface Inputs/Interface Outputs are only used in certain export markets

Programming I/O and Sounders Alarm Verification

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Select “Programming I/O and Sounders” from the Configure Menu Screen. Then press Alarm Verification

Service FRE off	Exit		Mute Buzzer	Reset
<div>Programming I/O and Sounders</div> <div>Add/Delete</div> <div>Change Date/Time</div> <div>Configure Heat Detectors</div> <div>Change Text</div> <div>Network</div> <div>Configure Zones</div> <div>Language</div> <div>Change Pascode</div> <div>Day/Night</div>				

Service FRE off	Exit		Mute Buzzer	Reset
<div>T1</div> <div>T2</div> <div>Panel Outputs</div> <div>Auxiliary Board</div> <div>Alarm Verification Features</div>				

Alarm verification feature
Activate AVF?

Enabled

Disabled

Exit

Sound Settings

Touch sound settings .

Service FRE off	Exit			Reset
<div>Sound Settings</div>				

Selections from the screens below will become the global settings for all loop sounders.

Service FRE off	Exit			Reset
<div>Volume</div> <div>Sound</div>				

Service FRE off	Exit			Reset
<div>Low</div> <div>Medium</div> <div>High</div>				

Service FRE off	Exit			Reset
<div>Volume</div> <div>Sound</div>				

Service FRE off	Exit			Reset
<div>Slow Woop</div> <div>Two Tone</div> <div>Continuous</div>				

Change Date/Time

Enter the Service Mode and Select Configure. Select Change Date/Time.

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add Zone		
Change Date/Time		Delete Zone		
Change Text		Add Device		
Configure Zones		Delete Device		
Change Password		Day/Night		

Set the Time Using the Buttons Shown Below.

Service FRE Off	Ok	Cancel		Reset
Current Time:		+1 Hour	+10 Mins	+1 Mins
10:16:12		-1 Hour	-10 Mins	-1 Mins
BST On				
Current Date:		+1 Day	+1 Month	+1 Year
Wednesday dd-mmm-yyyy		-1 Day	-1 Month	-1 Year

Change Zone Text

Enter the Service Mode and Select Configure. Select “Change Text”

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add Zone		
Change Date/Time		Delete Zone		
Change Text		Add Device		
Configure Zones		Delete Device		
Change Password		Day/Night		

Service FRE Off	Exit		Mute Buzzer	Reset
Change address text				
Change zone text				
Change Panel Text				

Press “Change
Zone Text”

Select the zone you wish to Change and Edit Using the Keyboard

Service FRE Off				Reset
Exit				
Zone 001 Zone 1				↑
Zone 002 Zone 2				
Zone 003 Zone 3				
Zone 004 Zone 4				
				↓



Enter the name for Zone 2									
Zone 2									←
1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
	A	S	D	F	G	H	J	K	L
CAPS	Z	X	C	V	B	N	M	,	.
OTHER		SPACE			OK			CANCEL	

Change Text

Enter the Service Mode and Select Configure. Select “Change Text”

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add Zone		
Change Date/Time		Delete Zone		
Change Text		Add Device		
Configure Zones		Delete Device		
Change Password		Day/Night		

Press “Change Address Text”

Service FRE Off	Exit		Mute Buzzer	Reset
Change address text				
Change zone text				
Change Panel Text				

Select the Address you wish to change and edit using the keyboard

Service FRE Off	Exit	Go To		Reset
Show All	Show Detectors	Show Alarms	Show I/O Units	
001 Device 1, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				↑
002 Device 2, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				
003 Device 3, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				
004 Device 4, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				
005 Device 5, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				↓

→

Name for address 1									
Address1.....									
←									
1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
	A	S	D	F	G	H	J	K	L
CAPS	Z	X	C	V	B	N	M	,	.
OTHER		SPACE			OK			CANCEL	

Change Panel Text

Enter the Service Mode and Select Configure. Select “Change Text”

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add Zone		
Change Date/Time		Delete Zone		
Change Text		Add Device		
Configure Zones		Delete Device		
Change Password		Day/Night		

Press “Change
Panel Text”

Service FRE Off	Exit			Reset
<div>Change address text</div> <div>Change zone text</div> <div>Change Panel Text</div>				

Correct Panel Text									
CF1100.....									←
1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
	A	S	D	F	G	H	J	K	L
CAPS	Z	X	C	V	B	N	M	,	.
OTHER		SPACE				OK		CANCEL	

Configure Zones

Enter the Service Mode and Select Configure. Select “Configure Zones”

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add Zone		
Change Date/Time		Delete Zone		
Change Text		Add Device		
Configure Zones		Delete Device		
Change Password		Day/Night		

Service FRE Off			Exit	Reset
Touch row to configure				
Zone 001 Zone 1				
Zone 002 Zone 2				
Zone 003 Zone 3				
Zone 004 Zone 4				

Select Zone into which device will be added

Service FRE Off	Exit	Goto		Reset
Show All	Show Detectors	Show Alarms	Show I/O Units	Show Selected
001 Device 1, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal			In Zone	↑
002 Device 2, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal			In Zone	
003 Device 3, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal			In Zone	
004 Device 4, Zone 2 Loop: 1, Zone: 2, Type : Opto/thermal			-	
005 Device 5, Zone2 Loop: 1, Zone: 2, Type : Opto/thermal			-	↓

Touch the dash to move the device into the selected zone.

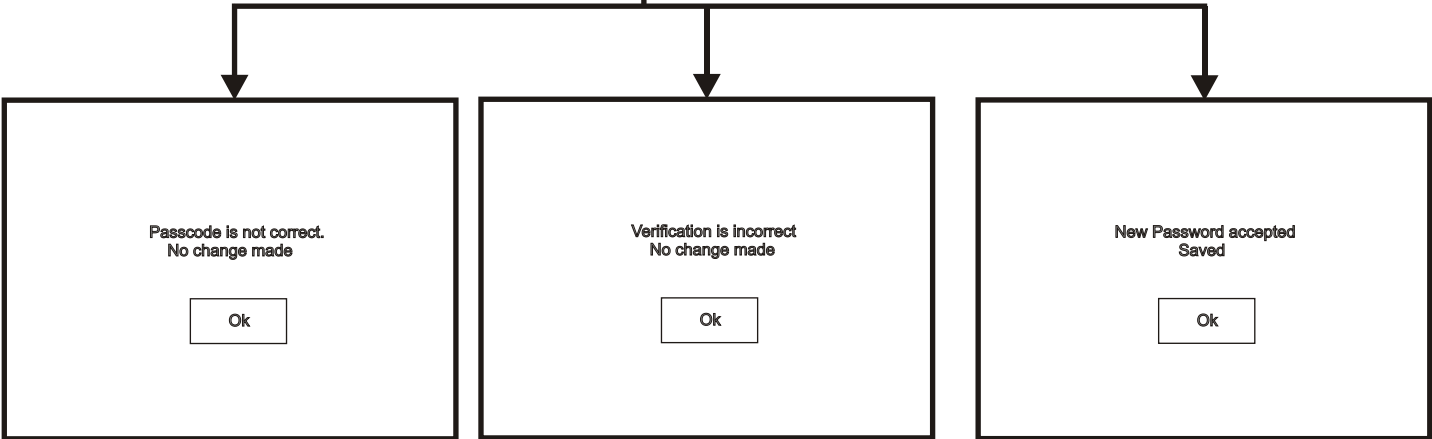
Change Passcode

Enter the Service Mode and Select Configure. Select “Change User Code”

Service FRE off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Password		Day/Night		



Please enter Passcode:	1	2	3
.....			
New Code:	4	5	6
.....			
Verify New Code:	7	8	9
.....			
<div>Cancel</div>	ok	0	←



Add Zone

Enter the Service Mode and Select Configure. Select “Add Zone”

Service FRE off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Password		Day/Night		

Service FRE Off	Exit			Reset
<div>Add Zone</div> <div>Delete Zone</div> <div>Add Device</div> <div>Delete Device</div>				

Add Zone ?

Yes

No

Delete Zone



Enter the Service Mode and Select Configure, select “Add/Delete” then “Delete Zone”

Service FRE Off	Exit			Reset
--------------------	------	--	--	-------

Add Zone

Delete Zone

Add Device

Delete Device

Select Zone to
be Deleted

Service FRE Off				Reset
--------------------	--	--	--	-------

Exit

Touch row to delete

Zone 001 Zone 1

Zone 002 Zone 2

Zone 003 Zone 3

Zone 004 Zone 4

Confirm or
Cancel
Deletion

Delete Zone 2?

Yes

No

Add Device

Enter the Service Mode and Select Configure, select “Add/Delete” then “Add Device”

Service FRE Off	Exit			Reset
--------------------	------	--	--	-------

Add Zone

Delete Zone

Add Device

Delete Device

Service FRE Off				Reset
--------------------	--	--	--	-------

Loop 1

Loop 2

Exit

Select a Loop
to Add a New
Device

Loop 2

Scanning Loop

Exit

Confirm
New
Device
and Loop

Delete Device

Enter the Service Mode and Select Configure, select “Add/Delete” then “Delete Device”

Service FRE Off	Exit			Reset
--------------------	------	--	--	-------

Add Zone

Delete Zone

Add Device

Delete Device

Select a
Device to
Delete

Service FRE Off	Exit	Goto		Reset
--------------------	------	------	--	-------

Touch row to delete

001 Device 1, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal	↑
002 Device 2, Zone 2 Loop: 1, Zone: 2, Type : Opto/thermal	
003 Device 3, Zone 1 Loop: 1, Zone: 2, Type : Opto/thermal	
004 Device 4, Zone 2 Loop: 1, Zone: 2, Type : Opto/thermal	
005 Device 5, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal	↓

Confirm or
Cancel
Deletion

Delete Device 3?

Device 3
Loop 1, Address 3, Device Type Opto/thermal

Yes

No

Configure Heat Detectors

Enter the Service Mode and Select Configure. Select “Configure Heat Detectors”

Service FRE off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Password		Day/Night		

Service FRE Off	Exit			Reset
Touch row to configure				
001 Device 1, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				↑
002 Device 2, Zone 2 Loop: 1, Zone: 2, Type : Opto/thermal				
003 Device 3, Zone 1 Loop: 1, Zone: 2, Type : Opto/thermal				
004 Device 4, Zone 2 Loop: 1, Zone: 2, Type : Opto/thermal				
005 Device 5, Zone 1 Loop: 1, Zone: 1, Type : Opto/thermal				↓

Select a
Device to
Configure

Select appropriate detector class

Service FRE Off	Exit			Reset
Thermal A1R				
Thermal BS				
Thermal CS				
Exit				

Network

Enter the Service Mode and Select Configure. Select “Network”, This menu defines whether messages are broadcast across the network or remain local.

Service FRE off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Password		Day/Night		

Select the specific required . E.g “Reset”

Service FRE Off	Receive message over network	
Reset	Network	
Evacuate	Network	
Silence	Network	
Fire	Network	
Fault	Network	
Pre-Alarm	Network	

Select if Network is required to be on/off

Service FRE Off		
Reset	Not Required	

Language

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Select “Programming I/O and Sounders” from the Configure Menu Screen. Then press Language

Service FRE off	Exit		Mute Buzzer	Reset
<div>Programming I/O and Sounders</div> <div>Add/Delete</div> <div>Change Date/Time</div> <div>Configure Heat Detectors</div> <div>Change Text</div> <div>Network</div> <div>Configure Zones</div> <div>Language</div> <div>Change Pascode</div> <div>Day/Night</div>				

Select required Language

Service FRE off	Exit		Mute Buzzer	Reset
<div>English</div> <div>French</div> <div>German</div> <div>Dutch</div> <div>Italian</div> <div>Portuguese</div> <div>Flemish</div> <div>Chinese</div> <div>Czech</div> <div>Danish</div> <div>Slovakian</div> <div>Hungarian</div> <div>Slovenian</div>				

Day / Night

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
<div>Commission</div> <div>Configure</div> <div>Test</div>				

Select “Day/Night” from the Configure Menu Screen.

Service FRE off	Exit		Mute Buzzer	Reset
<div><div>Programming I/O and Sounders</div><div>Add/Delete</div><div>Change Date/Time</div><div>Configure Heat Detectors</div><div>Change Text</div><div>Network</div><div>Configure Zones</div><div>Language</div><div>Change Pascode</div><div>Day/Night</div></div>				

Delay (minutes)				
Off				
1	2	3	4	5
6	7	8	9	10
Exit				
Feature is outside En54 spec				

Password Protection

Please enter Passcode	1	2	3
	4	5	6
	7	8	9
	ok	0	←

The system has password protection which restricts access to the DISABLE Menu and to TEST/COMMISSIONING MODE. The password is a four digit code and the default number is 2214. The password entry screen is accessed via the supervisor mode button. Press supervisor mode and the password entry screen will be displayed, type in the passcode and press Ok. If the wrong password is entered three times further access to the system is denied.

Section 4

Appendix

System Wiring

